

TITLE OF THE INVENTION

DEPLOYMENT SYSTEM FOR INTRALUMINAL DEVICES

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CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of application serial number 09/767,314 filed January 22, 2001 *now abandoned.* *US 6/5/04*

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FIELD OF THE INVENTION

The present invention relates to the transcatheter delivery and remote deployment of implantable medical devices and more particularly implantable intraluminal devices of either the self-expanding type or the balloon expandable type.

BACKGROUND OF THE INVENTION

Endoluminal therapies typically involve the insertion of a delivery catheter that transports an implantable prosthetic device into the vasculature through a small, often percutaneous, access site in a remote vessel. Once access to the vasculature is achieved, the delivery catheter is used to mediate intraluminal delivery and subsequent deployment of the prosthesis via one of several techniques. In this fashion, the prosthesis can be remotely implanted to achieve a therapeutic outcome. In contrast to conventional surgical therapies, endoluminal treatments are distinguished by their "minimally invasive" nature.

Self-expanding endoprostheses are generally comprised of a stent component with or without a graft covering over the stent interstices. They are designed to spontaneously dilate (i.e., elastically recover) from their delivery diameter, through a range of intermediary diameters, up to a maximal, pre-determined functional diameter. The endoluminal delivery and deployment of self-expanding endoprostheses pose several unique problems. First, the endoprosthesis itself must be radially compacted to a suitable introductory size (or delivery diameter) to allow insertion into the vasculature, then it must be constrained in that compacted state and mounted onto a delivery device such as a catheter shaft. Subsequently, the constraint must be removed in order to allow the endoprosthesis to expand to its functional diameter and achieve the desired therapeutic outcome. Preferably,